

Stream Team Annual Report

A Summary of Stream Team Activities

2006



Girl Scouts from Team 2915 collected about 30 bags of trash last spring along the Meramec River at Castlewood State Park.

After 17 years, the Stream Team Program has achieved several milestones. During 2006, another biggie was etched onto our growth chart and added to our list of accomplishments. **Our total number of volunteer hours now exceeds 1 million!** This accomplishment would take one person more than 114 years if they worked 24 hours a day, seven days a week! That's a chunk of time! In addition, our total participant hours for this year were higher than ever before. Indeed, the program's growth reflects not just the number of interested citizens in the state, but also the number of citizens who are willing to work to make a difference. This was also revealed as we reached an amazing 3000 Teams. The highlights in this report salute all of those that are involved and working day in and day out for the streams we cherish.

"Mirror, mirror, on the wall, was 2006 our greatest year of all?"

- ◆ 684 tons of trash were removed from Missouri streams.
- ◆ 9,362 trees were planted.
- ◆ The first *Introduction to Groundwater* and *Building a Plywood Canoe* courses were held in addition to several other Stream Team Academy workshops.
- ◆ Regional meetings continued around the state.
- ◆ Large-scale cleanups led the way by involving hundreds of volunteers.
- ◆ Over 1,200 storm drains were marked to alert passersby that these inlets are linked directly to streams.
- ◆ 1,861 trips were made to monitor water quality in an adopted stream.
- ◆ \$3.3 million worth of volunteer labor!

"Over the seven jewelled hills, beyond the seventh fall, in the land of Missouri with beautiful streams—YES—it was the greatest year of all!"

The next few pages highlight and summarize even more of our accomplishments. You are cordially invited to share in the details with us as we reflect on 2006.

Missouri Stream Team . . . promoting
citizen awareness and involvement in
river and stream conservation.



◆ Education ◆ Stewardship ◆ Advocacy ◆

Stream Team Success

Citizens Are Committed to Water Quality Monitoring

Water quality monitoring turns in a strong finish again this year, outpaced only by litter pickup activities. We have trained over 5,750 citizens in our water quality training classes. During 2006, 390 dedicated volunteers monitored 397 sites throughout the state. This year a total of 38 workshops were held. The training workshops held and the number of participants are summarized below:

Water Quality Monitoring Workshop Type	Number of Workshops	Number of Volunteers Trained
Introductory	19	367
Level 1	9	160
Level 2	4	26
Level 3	2	3
Sediment	3	19
Total	37	575

Specialized sampling and training opportunities continue to be offered for interested water quality volunteers. In 2006 we continued to offer training on monitoring sediment and chlorides. Sediment monitoring is important in developing areas where excessive sediment from runoff can degrade streams. Three sediment monitoring workshops were held this year for eligible volunteers that have been trained through Level 2. The workshops focused on the urbanization of streams and the effects on sediment and stormwater. Monitoring for chlorides will provide baseline data that has not generally been available in most areas. At high levels, chlorides can be toxic to aquatic life. This problem can be large in urban areas.

The program is also in the process of implementing a new effort entitled Cooperative Stream Investigations (CSI). This specialized monitoring will foster cooperation between the Missouri Department of Natural Resources (MDNR), watershed management committees, and volunteers in performing sampling. The primary focus of CSI sampling will be *E.coli*.



Sometimes it's the scene at the end of a day of hard work which makes it all worthwhile. Helen Abbott of Stream Team 1523 captured the beauty of the upper Meramec River while participating in World Water Monitoring Day last fall. Statewide, Stream Team volunteers reported more than 200 monitoring trips in October alone.

CSI volunteers must be at least Level 2 trained and must have submitted consistent and reliable data. Volunteers will also be required to attend the MDNR's Basic Sampling Training. They will be trained alongside agency personnel on the protocols for collecting and handling environmental samples, transportation to a qualified laboratory, and proper use of the chain of custody. Sample analyses will be performed by the State Environmental Laboratory or an MDNR authorized laboratory.

EPT taxa, Ephemeroptera (Mayflies), Plecoptera (Stoneflies), and Tricoptera (Caddisflies) continue to be important indicators of water quality when identified to family level. This type of monitoring is very tedious and requires knowledge of gill shape or even mouth parts and requires access to a dissecting microscope. While this type of monitoring is not for everyone, interested Level 2 volunteers should look for more of these workshops in 2007.

To provide even more usable information, we added a section regarding the presence

or absence of fish to our water quality data sheets this year. Program staff in collaboration with MDNR officials determined that this information, in combination with other details, could be beneficial in determining the aquatic diversity of Missouri streams.

The Department of Natural Resources recently recognized the valuable efforts of Missouri Stream Team members participating in water quality monitoring. Department director Doyle Childers requested an additional \$10,000 from the department's general revenue budget be allocated to purchase new and replacement equipment for the program.

We would like to take this opportunity to encourage Stream Team volunteers who no longer use their equipment to contact us so that the equipment can be redistributed throughout the program to keep expenses down.

Volunteer Water Quality Monitoring continues to be one of the most important components to the Stream Team Program. Staff continually look for new ways to refine and expand our training and capabilities.

Stream Team Growth

Stream Team Academy . . . The "University Without Walls"

A total of 116 people were trained in our Academy workshops this year. Three popular workshops were repeated, including *An Introduction to Mussels*, *An Introduction to Hellbenders*, and *An Introduction to Crayfish*. Two new workshops, *An Introduction to Groundwater*, and *Building a Plywood Canoe* were introduced to volunteers.

An Introduction to Mussels was once again taught by some of the best malacologists in our area. They shared expertise on identification, life history, and ecology. A field trip was also held on the Meramec River where local species were observed and identified.

An Introduction to Hellbenders was led by Conservation Department Herpetologist Jeff Briggler and allowed students to spend a day on the Current River learning, observing, and surveying for this intriguing species.

An Introduction to Crayfish continues

to be one of our most popular workshops. Led by Stream Team Biologist, Chris Riggert, attendees spent the day learning about crayfish life history and identification. Several attendees joined us the following day for the optional field trip to survey live specimens.

An Introduction to Groundwater included the basics of groundwater hydrology, how regional groundwater differences are related to the geology and soils of Missouri, and the significance of groundwater/surface water interactions. The course was taught by MDC Stream Unit staff member, Dr. Paul Blanchard.

Building A Plywood Canoe was a new workshop to suit all our Stream Teams who also love woodworking! The participants at this workshop worked on three canoes at once (one from scratch and two partially completed in advance) in order to learn every step in the process. Stream Team Biologist, Bob Schulz, hosted the workshop along with Stream Team 713 members.

Awards were presented, winners were congratulated, and all Teams were honored at the annual Meramec Watershed Celebration & Picnic held in July at Meramec State Park. A day of food and fun was well-deserved by Missouri Stream Teams after another successful and outstanding year of volunteer efforts.



In the Bag

The Program continues to sponsor *Stash Your Trash*, an effort which provides mesh bags to Canoe Outfitters and Stream Team volunteers. This year, over 280,000 bags were provided to 121 outfitters. An additional 14,600 were provided to Stream Teams. This year we introduced a larger green mesh bag and a 50-gallon plastic bag for our litter cleanup events. We provided 10,533 of the 2'x3' green mesh and 3,700 of the 50-gallon bags. These bags helped to make it possible to remove several hundred tons of trash from Missouri streams.

The Canoe Outfitters show their support by offering discounts to Stream Team volunteers. This year nearly 100 of these same outfitters were featured in our directory offering discounts.

Another highlight in the area of trash bags included a significant contribution made by the Anheuser-Busch Company. They generously donated \$5,000 to purchase additional supplies of the new larger green mesh trash bags. This allowed for the purchase of nearly 7,000 bags! "Thank you" Anheuser-Busch!

Regional Meetings Continue

Northeast and Southeast Regions of the state hosted Stream Team gatherings. The Northeast meeting was held in Kirksville. The day's agenda included program updates, information on new activities and the Stream Team Activity Guide, and a learning session on streams and watersheds. A fish fry was on the menu for lunch and everyone took advantage of the down time to network with other volunteers. Many left the meeting with new ideas for re-igniting their Team as well as plans to link up with other groups in their area.

The Southeast meeting was held near Grassy and was organized by Stream Team

Stream Team Potential

members Kathy Medlin and Dixie Troyer. The group met at the Castor River Campground and enjoyed a picnic lunch, a litter pickup, and water quality demonstrations on the Castor River in addition to covering local information and program updates.

These regional get-togethers continue to be a great way for Teams to gain information and meet others around them. 2007 will feature three meetings in Central, Southwest and St. Louis regions.

We Can't Get Enough of Those Stream Litter Pickups!

Large-scale stream litter pickups continue to grow in size and popularity. Some of the groups leading the way are:

- ◆ **Stream Team 175, Friends of Lakeside Nature Center:** Blue River.
- ◆ **Stream Team 713, Upper Jacks Fork River Rats:** Jacks Fork River.
- ◆ **Stream Team 1365, James River Basin Partnership:** James River.
- ◆ **Stream Team 1839, Bryant Creek Watershed Project:** Bryant Creek.
- ◆ **Stream Team 1875, Missouri River Relief:** Missouri River.
- ◆ **Stream Team 2226, Piedmont City Team:** McKenzie Creek.
- ◆ **Stream Team 2447, PCCP Gophers:** Little Piney River.
- ◆ **Operation Clean Stream (several Teams participate including Stream Teams 3, 5, 72, 100, 151, 211, 288, 1000, 1008, and 1857):** Meramec River and tributaries.

Large cleanups involving hundreds of participants, heavy equipment and removal of hundreds of tons of trash, take an extraordinary amount of planning and coordination. Many of the members involved in these events are now our "experts" and we look to them for innovations and ideas to share with other groups.

Top Teams Receive Our Seal of Approval

Every year it is an honor to bestow our Stream Team Awards on those that rise to the top. The awards are chosen from among the leaders in several categories. Rankings are taken from activity reports submitted by Team members. This year's winners were:

Adult Category

Awareness: Team 713 Upper Jacks Fork River Rats

Honorable Mention: Team 2428 Little Blue River Watershed Coalition

Leadership: Team 1875 Missouri River Relief, Inc.

Honorable Mention: Team 1008 Twin River Rangers

Stewardship: Team 211 Arnold Stream Team

Honorable Mention: Team 3 Bourbeuse River Clean Stream

Youth Category

Awareness: Team 2416 Carthage High School

Honorable Mention: Team 2800 Smith Cotton High School

Leadership: Team 529 Sparta Elementary School GATES

Honorable Mention: Team 697 Gallatin R-V School

Stewardship: Team 1370 Marshfield High School

Honorable Mention: Team 1089 Fulton High School LMSCT

Twenty-three members have also achieved the status of having monitored for ten years. These individuals were presented plaques and honored at events and workshops throughout the state.

Water Educator of the Year Awards were presented to members who are Stream Teams doing Water Quality Monitoring and Project WET (*Water Education for Teachers* curriculum). Those honored were Margaret Bahe (Team 507), Frank and Theresa Johnson (Team 444), and Julie Cook (Team 1294).

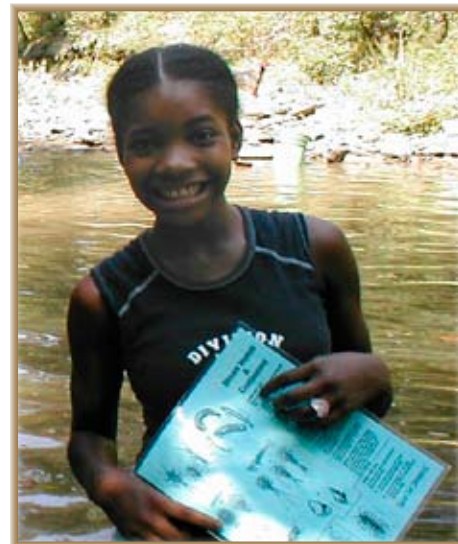
Stream Team staff aren't the only ones who recognize the accomplishments of our volunteers. This year Vicki Richmond (Teams 175 & 1878) and the James River Basin Partnership (Team 1365) both received the Conservation Federation of Missouri (CFM) *Water Conservationist of the Year* Award. Joyce Haynes (Team 2889) was also honored by CFM with the *Conservation Communicator of the Year* Award. Marty Bratner (Teams 1181 & 2216) received the Boy Scouts of America

Young American award for many of his efforts including his involvement in Stream Team.

What's Around the Corner?

What can you expect to see from us in 2007? MORE! More Academy workshops, more regional meetings, and more educational events. Also planned for 2007 are special workshops for float outfitters to help them learn more about streams and watersheds. We will take a closer look at Association development and foster mentoring opportunities between seasoned and new volunteers.

Success stories abound within the program, and it is the dedication of the volunteers who are involved that make it all possible. Only they can determine for sure what 2007 will hold. Check in next year and we'll tell you all about it!



The future of Missouri Stream Team rests in the hands of the children we touch.

The Stream Team website at www.mostreamteam.org offers a world of information about the Stream Team Program, activities, workshops, and much more. Visit the Stream Team Shopping Mall or buy Stream Team Coffee to help us raise funds for the Program. Log on for a visit today!

Stream Team Activity Totals 2006

These totals are based on activity reports submitted by Stream Teams.

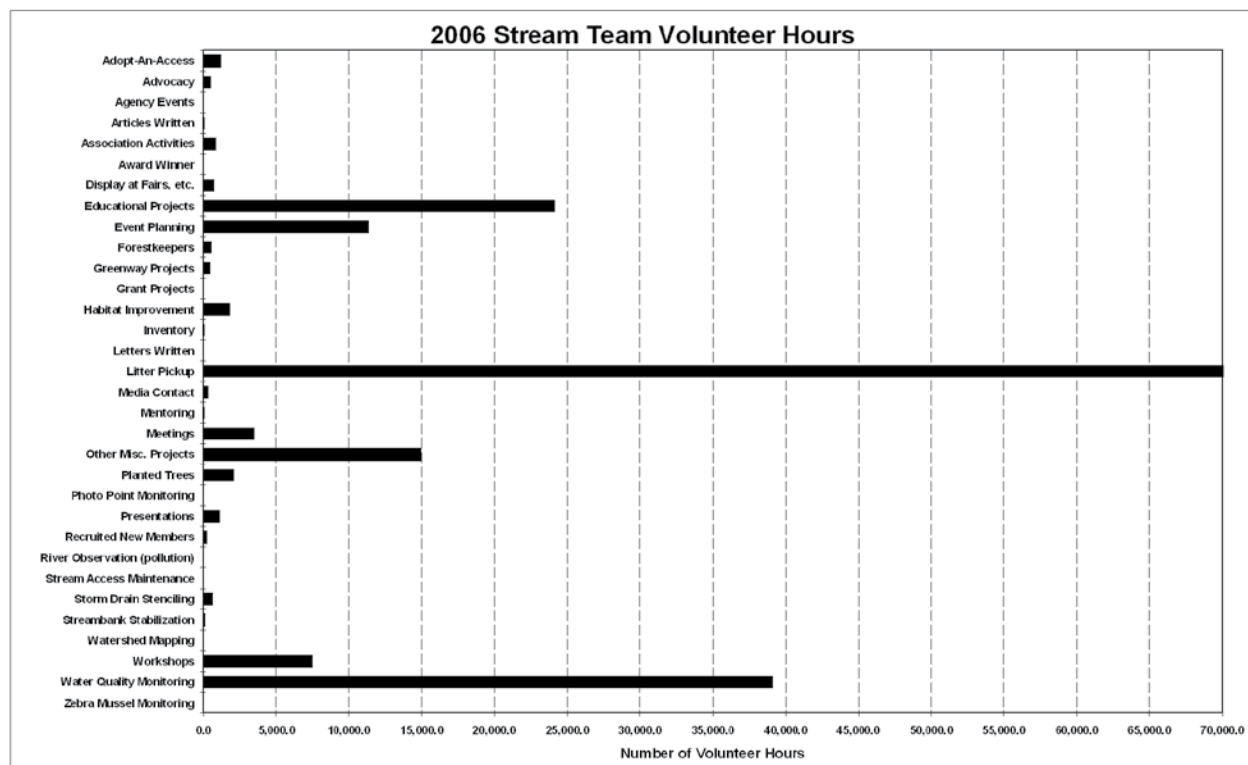
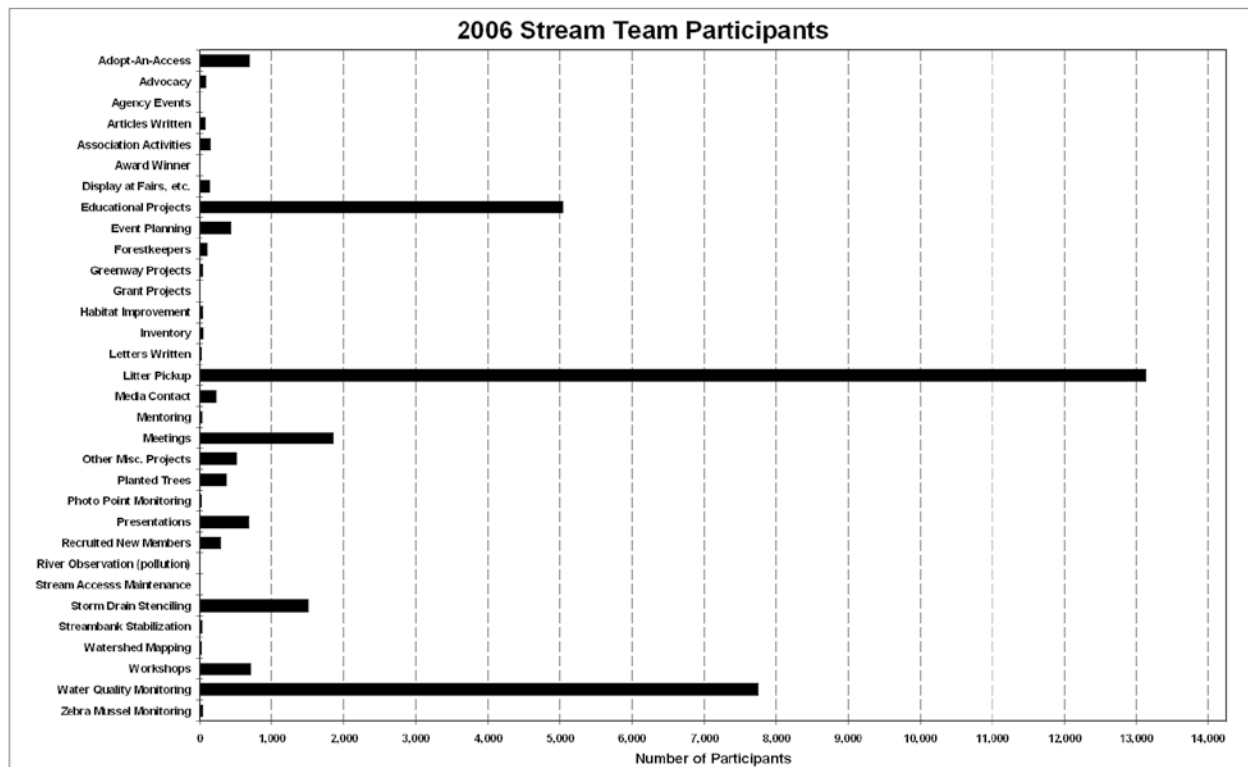
Activity	Participants	Time Spent (volunteer hours)	Number of Units	Value (Hours x \$18.77*)
Adopt-An-Access	689	1,187.5	43 accesses	\$21,422.50
Advocacy	91	492.0	492 hours	\$8,875.68
Agency Events	6	12.0	4 events	\$216.48
Articles Written (newspaper, newsletter, etc.)	80	109.5	32 articles	\$1,975.38
Association Activities	147	896.0	896 hours	\$16,163.84
Award Winners	7	7.0	2 awards	\$126.28
Display at Fairs, etc.	145	740.0	29 events	\$13,349.60
Educational Projects	5,041	24,101.5	188 events	\$434,791.06
Event Planning	433	11,342.5	112 events	\$204,618.70
Forestkeepers -- Forest Monitoring	117	554.0	6 trips	\$9,994.16
Greenway Development Projects	36	480.0	12 projects	\$8,659.20
Grant Projects	2	10.0	1 project	\$180.40
Habitat Improvement	35	1,798.0	11 projects	\$32,435.92
Inventory	51	98.0	13 inventories	\$1,767.92
Letters Written in Support of ST Issue	15	43.5	18 letters	\$784.74
Litter Pickups	13,128	71,257.0	684 tons of trash	\$1,285,476.28
Media Contacts	237	367.5	51 interviews	\$6,629.70
Mentoring	32	83.0	83 hours	\$1,497.32
Meetings (held or attended)	1,853	3,480.5	711 attendees	\$62,788.22
Other Miscellaneous Projects**	515	14,963.0	39 projects	\$269,932.52
Planted Trees	377	2,082.5	9,362 trees	\$37,568.30
Photo Point Monitoring	21	53.0	37 trips	\$956.12
Presentations to Other Groups	673	1,120.0	49 presentations	\$20,204.80
Recruitment (new members)	290	270.0	206 people	\$4,870.80
River Observation (related to possible pollution events)	4	4.0	4 hours	\$72.16
Stream Access Maintenance	14	19.5	10 events	\$351.78
Storm Drain Stenciling	1,500	672.0	1,204 drains	\$12,122.88
Streambank Stabilization Projects	31	145.0	8 events	\$2,615.80
Watershed Mapping	16	18.0	15 trips	\$324.72
Workshops (attended or conducted)	705	7,506.5	756 attendees	\$135,417.26
Water Quality Monitoring	7,757	39,078.0	1,861 trips	\$704,967.12
Zebra Mussel Monitoring	34	50.0	5 trips	\$902.00
Totals	34,082	183,041.0		\$3,302,059.64

* \$18.77/hour is the current national non-agricultural wage rate for the estimated value of volunteer time. This figure is provided annually courtesy of the U.S. Department of Labor.

** Includes projects like web site development, newsletters, scout programs, fund-raising projects, etc.

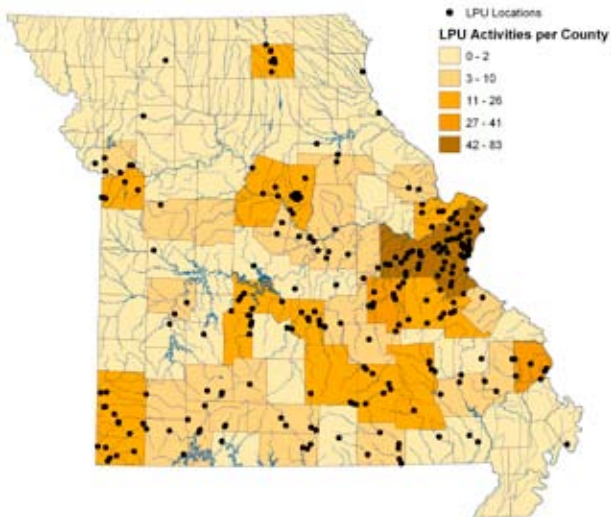
**Over
\$3.3 million!**

Stream Team Activity Charts 2006

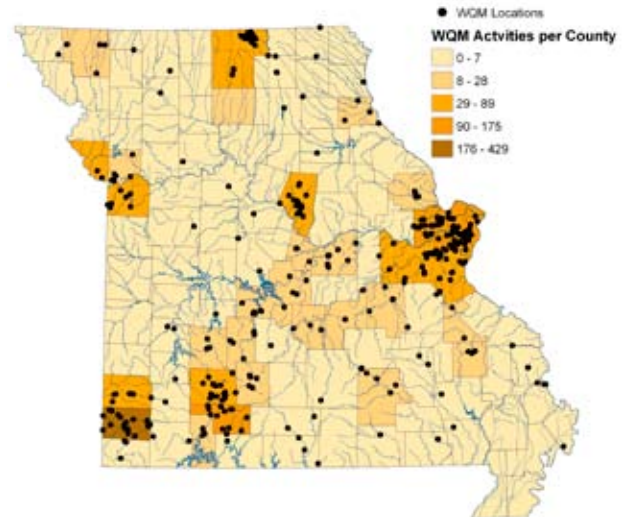


Stream Team Activity Sites 2006

LITTER PICKUP SITES

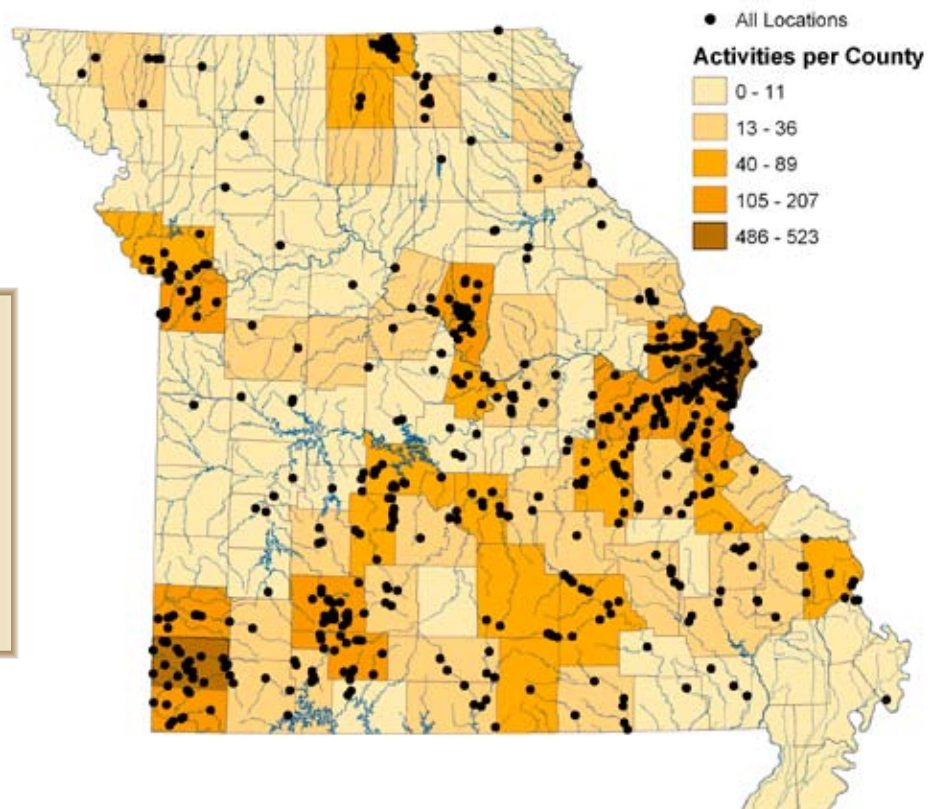


WATER QUALITY MONITORING SITES



ALL ACTIVITY SITES AND ALL ACTIVITIES PER COUNTY

These maps indicate sites where reported activities occurred in 2006. Some activity sites are not mapped because we do not have detailed site information, and many other activities are not site-specific.



Stream Team Reflections 2006



Michael Patterson and son have faithfully cleaned Shoal Creek and Elk River in Newton County since they formed Stream Team 2855. They reported 17 activities in 2006; planted 555 tree seedlings; and collected trash, car parts, and lots of fishing line!



Stream Team members from multiple counties in northeast Missouri valued new ideas and networking opportunities during their Northeast Regional Stream Team meeting in Kirksville.



The Bull Creek Rapid Riders of Stream Team 2670 conducted their first annual cleanup along Bull Creek near Walnut Shade in Taney County. They filled a dump truck half full of trash!



Kim Garbs and students from West Middle School in O'Fallon participated in the St. Charles County River Cleanup on Peruque Creek. They also put an announcement in the school newspaper inviting new members to join Stream Team 2126.



Jessi Callicotte of Team 2663 (The H2O Coalition) took a series of photos along Fox Creek in St. Louis County for her Photo Point Monitoring project. She discovered areas of streambank erosion and a junked car.

♦ Commitment ♦ Respect ♦ Cooperation ♦



Jon Casey's Lafayette High School Team held a litter pickup, sampled water quality, and completed an inventory at Blacksnake Creek in Buchanan County. They also displayed Stream Team information at a St. Joseph Blacksnakes baseball game, a great community outreach opportunity.



Muriel Desbleds submitted this photo of her Academic Lafayette students (Team 3076) monitoring water quality on Massey Creek in Cass County.



Seventeen participants enjoyed a brand new Stream Team Academy workshop this year: *Building a Plywood Canoe*. Look what they accomplished with two sheets of plywood, a gallon of epoxy resin, fiberglass tape, some wood trim, and (of course) duct tape!



Chuck Hird (above right) and his Sand Creek Rovers Team 882 held their 10th annual pickup in Saline County. Chuck said, "We have made a difference over the years, as shown by the limited amount of trash collected."



What a Team! The Southwest Missouri Fly Fishers (Stream Team 57) held their annual Super Bowl Sunday litter pickup in the cold this year. Crane Creek in Stone County is minus a whole lot of trash and tires thanks to the SMFF group.

◆ Strength ◆ Accomplishment ◆ Heart ◆



Check out this cooperative effort! Anheuser-Busch sponsored a massive cleanup on the Mississippi River. 400 people including A-B employees, Stream Teams, Missouri River Relief, and citizen volunteers joined forces to clean 20-30 miles of the mighty Mississippi.



Stream Team Assistant Valerie Hentges (above left) trained volunteers how to identify macroinvertebrates at the Introductory Volunteer Water Quality Monitoring workshop held in Macon.



Harold Kerns reported his Boy Scout Troop 60 from Savannah (Stream Team 2320) pulled two dozen bags of trash from the Current River during their summer float trip



The Fousts of Team 2517 conducted their annual Earth Day litter pickup on Bear Creek in Marion County. They hauled off five truck loads of trash and three truck loads of metal!



Science students from Gallatin R-V High School monitored water quality on the Grand River at Old Jameson Bridge. They did double duty by stopping at Wabash Access and picking up trash. Teacher Dennis Steigerwalt and Team 697 have been active since 1995!



Greg and Debbie Cox of Team 2724 (The Soggy Bottom Mudbugs) rustled up an impressive haul of tires and trash from Shoal Creek in Caldwell County.

♦ Character ♦ Effort ♦ Enthusiasm ♦



Walter Smith reported his Courtois Lodge Team 124 planted 1,000 tree seedlings along Courtois Creek over a three-month time frame last spring.



Anheuser-Busch came to the aid of Stream Teams with a generous donation of \$5,000 to purchase new, larger-sized trash bags. Word has spread and Stream Teams are loving the bigger bags! Thanks, Anheuser-Busch!



Tom Bowdin's Team 2911 (The Platin Creek Litter Gitters) pulled a refrigerator out of the water at their very first cleanup. They are more living proof of what we already knew—no job is too big for our Stream Teams to tackle!



Bill Brandt and friends of Stream Team 66 (Heart of America Fly Fishers) rescued a dumpster from the Blue River after a flood had swept the it from dry land and deposited it against Red Bridge. They baled water and floated the dumpster to the bank where it was pulled out with a Bobcat. Whew!



The Ozark Wilderness Waterways Club (Team 41) rescued a trashed canoe trapped in a rootwad during their 47th annual cleanup event. What a balancing act!

Photo by Ron Bishop

Stream Team Staff

2006



Back row from left: John Hoke (DNR), Chris Riggert (MDC), Mark Van Patten (MDC), Wayne Maresch (DNR)

Front row: Sherry Fischer (MDC), Shelley Banks (MDC), Tim Rielly (MDC), Priscilla Stotts (DNR)

Not pictured: Paul Calvert (MDC), Bob Schulz (MDC), Mary Clark (DNR)

*Thank you, Stream Teams,
for another year of hard work and dedication.
Don't forget, we are here to help!*



Stream Team is sponsored by
Missouri Department of Conservation
Missouri Department of Natural Resources
Conservation Federation of Missouri



Questions?

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